



university of
groningen

Groningen Institute
of Archaeology (GIA)
Research Review
2016-2021



Research Review according to the
Strategy Evaluation Protocol 2021-2027

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Preface

On behalf of the committee I wish to express our thanks to the staff and PhD candidates of the GIA, and in particular to the GIA director, for all their inputs into the review process. The reflections of GIA members, and our discussions with them during the on-site visit, enabled the committee to gain a clear picture of the research activities of this impressive unit, as well as upcoming challenges and future directions. We thank also the Faculty of Arts for their support and contributions to the process, which clarified the wider institutional context of the GIA.

The committee worked very well together, with each member contributing their own unique perspective and experience. The guidance of our secretary, Drs. Erik van der Spek, ensured that our discussions were productive and on schedule.

Our review concludes with a series of recommendations, ranging from matters of physical infrastructure to diversification and inclusivity in the GIA. We frame these as high-level adjustments for a research unit of international importance in the discipline of archaeology and in wider fields of enquiry in the human sciences.

Prof. Amy Bogaard
Chair of the committee

December 23, 2022

I. Introduction

The executive board of the University of Groningen commissioned a review of the Groningen Institute of Archaeology (GIA – see appendix 3 for a list of abbreviations) as part of the university's regular six-year quality assurance cycle. This review had the dual purpose of improving the quality and relevance of research, and providing accountability to the executive board, funding bodies, the government and society as a whole.

Composition of the committee

The executive board appointed a review committee (hereafter: 'committee') of five external peers, including a PhD candidate. The committee consisted of:

- Prof. dr. A. (Amy) Bogaard, (chair), Professor of Neolithic and Bronze Age Archaeology at the University of Oxford;
- Prof. dr. F.M.R. (Frank) Vermeulen, Professor in Roman archaeology and archaeological methodology, Ghent University, Belgium;
- Prof. dr. G. (Graeme) Warren, Professor in the School of Archaeology, University College Dublin, with specialism in early prehistory;
- Dr. M. (Martin) Meffert, Senior Policy Officer Archaeology Province Noord-Brabant, The Netherlands;
- S.L. (Louise) Olerud MA, PhD candidate at Leiden University.

Appendix 1 includes a short resume of each of the committee members.

The committee was supported by dr. E.J. (Erik) van der Spek, who was appointed independent secretary to the committee.

To ensure a transparent and unbiased assessment process, all members of the committee signed a statement of impartiality and confidentiality. Prior to the site visit, existing professional relationships between committee members and research units under assessment were discussed. The committee concluded there was no risk in terms of bias or undue influence.

Assessment criteria

The research evaluation followed the aims and methods described in the Strategy Evaluation Protocol 2021-2027 ('SEP'). This protocol for the evaluation of publicly funded research in the Netherlands was drawn up and adopted by the Universities of The Netherlands (UNL), the Dutch Research Council (NWO), and the Royal Netherlands Academy of Arts and Sciences (KNAW).



Under the Terms of Reference issued by the University of Groningen, the committee was required to evaluate the quality of research conducted by GIA as well as to offer recommendations in order to improve the quality of research and the strategy of GIA. Specifically, the committee was asked to judge the performance of the unit on SEP's three main assessment criteria (Quality, Relevance, Viability), and to offer its written conclusions as well as recommendations based on considerations and arguments. Four additional aspects also listed in SEP (Open Science, PhD Policy and Training, Academic Culture and Human Resources Policy) were to be taken into consideration when evaluating the three main criteria.

Documentation

Prior to the site visit, the committee received the self-evaluation report of the institute, including the information and appendices required by the SEP. The following additional documents were provided:

- Strategy Evaluation Protocol 2021-2027
- Terms of Reference for the research review
- Documentation on University and Faculty level (strategic plans, Open Science Programme, et cetera)
- Documentation on Institute level (for instance annual reports, analysis of scientific output, et cetera).

Working method

Leading up to the site visit, the committee members were asked to study the documentation and to formulate preliminary findings and questions.

The two-day site visit started with a committee meeting, during which the committee discussed its preliminary assessments. Additionally, it considered procedural matters and agreed upon a working method. During the site visit days, the

committee met with representatives of the Faculty board and the institute, including the management, well-established and more junior researchers and PhD candidates. The site visit was concluded with a meeting in which the committee discussed its findings and conclusions, followed by a presentation of initial findings and recommendations by the committee. The schedule for the site visit is included in appendix 2.

After the site visit, the secretary drafted a first version of the committee report, based on the assessments drawn up by the committee members. This draft report was circulated to all committee members for comments. Subsequently, the draft report was presented to GIA for factual corrections and comments. After considering this feedback in close consultation with the chair and other committee members, the secretary finalised the report. The final report was presented to the executive board of the University of Groningen.

II. Groningen Institute of Archaeology

1. Organisation and strategy

The Groningen Institute of Archaeology (GIA) is one of the three research institutes of the Faculty of Arts of the University of Groningen. GIA engages in archaeological research in Northwest Europe, the Mediterranean and the Arctic. The focus of the research in these areas is on mortuary practices, settlements, material culture, landscape use and the relations between people, animals and plants. The institute, which also holds a number of important reference collections on archaeobotany and archaeozoology, is housed in three different buildings in Groningen. The Arctic Centre, an interdisciplinary institute for Arctic Studies, is also part of GIA. The institute holds a tenured staff cohort of 17, with an average of 20 PhD candidates and 10 postdocs.

During the previous review period, the research was organised in research groups. Currently this is no longer the case. While GIA staff work in various regions, the GIA works as a research community in which research topics (methods, theoretical perspectives) are shared across the institute. The institute distinguishes the following research themes:

1. Bioarchaeology
2. Digital archaeology
3. Critical Heritage Studies
4. Roman Mediterranean Archaeology
5. Arctic and Antarctic Studies
6. Greek Archaeology
7. Archaeology of Northwest Europe

In the past period (2016-2021), the strategy of GIA has been aimed at maintaining a high quality of research. This is done by offering incentives and good facilities to researchers and by safeguarding research time for staff members (within GIA a relatively high percentage of 57% of the time is reserved for research). The publication aim is set

by the Faculty at two academic articles per year per 40% research time, including at least one peer-reviewed article. For funding an important target has been to establish a monitoring system and to achieve an increase in external funding. Other faculty targets were formulated on the number and success rate of PhD candidates, on open access and on societal impact; these faculty targets will be covered in the appropriate sections below.

For the next period, this strategy is to be continued and expanded. In this, GIA follows the strategic plan of the Faculty of Arts for 2021-2026, entitled 'Building the State of the Arts', which was approved by the University Board. One of the main points of this strategic plan is to raise the level of the Faculty's research facilities by setting up so-called 'Collaboratoria' (co-working spaces), top-class laboratories, and 'The Vault', to manage GIA's unique archaeological collections which are currently not stored in appropriate conditions. Another strategic aim is to increase the visibility and usability of the Faculty's research for the outside world with the help of the Faculty science communication specialist (see below under 'Societal relevance'). For PhD candidates the main target is to allow them to complete their theses on time by using clear feasibility requirements at the start of each PhD trajectory and by enhancing supervision and coaching (see below under 'PhD programme'). The committee has established that the new strategy has been discussed with all staff, including PhD candidates, and with a number of stakeholders. The input of these groups has been used in the final draft of the strategy document.

Building plans and support staff

The committee has learned that the building plans are a top priority for management, staff and Faculty. Rehousing plans include not only the laboratories and collections: the Faculty aims to rehouse GIA as a whole in the Harmonie building. This would be a huge improvement for all concerned and would help to increase the collaboration across research groups. A Program of Requirements has been written and approved (May 2021). The Harmonie building may also include 'The Vault', a new high-quality facility to

house GIA's reference collections in archaeobotany and archaeozoology.

Although the Program of Requirements has been approved, a formal decision at university level about the building plans has yet to be taken. According to a tentative schedule the building could be finalized in 2026–2027. However, new energy requirements and issues with the availability of building staff and materials may cause unforeseen delays. The research staff of GIA told the committee that the programme of requirements have been taking a long time to finalize and expressed their concerns that the realisation of appropriate housing for the collections may be postponed. The committee has visited the collections and shares these concerns. World-class collections are currently housed in rooms that were described during one of the conversations as 'charming', but unsuitable for storing valuable items. The main problem is the fire hazard: the committee learned that in the rooms (actually an attic) where the archaeozoology collection is housed, a fire has already broken out twice. The housing situation not only poses a threat to the collection, but also to the staff and students. A final issue is that some of the rooms are out of reach for students or staff with physical disabilities.

The committee is of the opinion that the current housing situation of the GIA collections is unacceptable. A swift realisation of 'The Vault' or a similar facility would be the best option. If, however, the relocation would turn out to be a long-term prospect, the committee believes that a temporary solution should be found in another building, where safety and protection of the world-class collection could be ensured and where the collections are accessible to all concerned.

Closely connected to the labs and collections is the staff that supports these. GIA has a loyal group of support staff, for instance staff that are trained to produce drawings that can serve as illustrations of scientific publications. However, the self-evaluation report has identified a weakness in the development of new methods (for instance digital skills), that are difficult to keep up with on the basis of the tenured support staff. This requires a

strategic decision on the tasks and training of current support staff, and the hiring of new scientific staff. The committee fully agrees with this view and feels that especially the digital skills within GIA should be strengthened.

Governance

In the previous period a new, more inclusive, management structure has been put into place. The GIA director now organizes several meetings per year for all tenured staff to discuss current issues and strategy. In addition, meetings with all teaching staff are being organized, while incidental research meetings are being held; these are experienced as inspiring and very enjoyable meetings. The committee got the impression that the organizational culture within GIA is largely informal, which is a logical consequence of being a small institute. GIA strives for an open and inclusive community. The committee sees the positive aspects of an informal culture, but also recognizes some risks attached to this. An example is the onboarding and training of postdocs, which appear to 'fall through the cracks' (see below, under HR policy). The committee feels that it is important for GIA to maintain a firm grip on the entire organisation of research and education, without losing the advantages of an informal organisation.

A strong point of GIA and the Faculty of Arts is the way funding applications are organised. As mentioned, the strategy has been aimed at developing a monitoring system of grant applications, and to achieve an increase in competitive applications for external funding. At Faculty level a funding officer is available to help researchers in writing successful grant applications. The committee noted that GIA has realised some impressive results in the previous six years.

As a final note on strategy, the committee found the position papers that have been developed for a number of selected research themes very insightful. These position papers offer an overview of developments in the fields, of the position of GIA in these fields, and of the ambitions in the coming years. The committee feels that these position papers represent a useful exercise to look

to the future and encourages GIA to continue on this path and to develop an overall position paper for GIA as well.

In summary, the committee gained the impression that the strategy of GIA is well-developed and addresses relevant issues. The funding strategy has been very successful, leading to an impressive research output. The committee agrees with the focus on improving the research facilities; at the same time this ambition poses a risk, since these facilities depend on building plans that still have to be realised. The committee stresses the importance of an imminent relocation of the archaeozoology and archaeobotany collections, which are currently at risk. The committee also agrees with the focus on increasing visibility, which might help to enhance the societal relevance of much of GIA's research.

2. People and Community

Academic culture

GIA aims to be a safe space and harbours a small, tightly knit research community in which students, PhD candidates, postdocs and tenured staff with different backgrounds collaborate. The site visit confirmed that both staff and PhD candidates experience GIA as an open and inclusive community that allows all participants to provide input and developing new initiatives.

In the self-evaluation report, diversity is labeled a core value in the Faculty's organisational culture, as it is seen to open up new perspectives, bring in new leadership styles and stimulate creativity. Data on the composition of staff at Faculty level reveal that 38% of academic staff is non-Dutch and 40% is female. Specific data on GIA were not available to the committee. While the Faculty's gender balance at professorial level (34% female, 66% male) does not compare unfavourably with what is customary elsewhere in the Netherlands, there is certainly room for further improvement. The self-evaluation report mentions as a weakness that "GIA tenured staff is imbalanced in terms of age and diversity (gender, nationality)".

The staff noted some complacency concerning the issue of gender balance: according to them, management and staff too easily assume that gender issues are solved by implementing a hiring policy. One of the staff maintained that a full understanding of what differences contain and imply is lacking and that the gender balance is still not as it should be. The committee believes full and open conversations about gender and diversity are needed as a starting point for developing policies within GIA and the Faculty.

The Faculty is aware that more work needs to be done to achieve a good balance, especially among the higher ranks. Gender balance is, for instance, a focal point in strategic personnel plans and thus informs hiring decisions. The committee learned that a protocol is used when hiring full professors, that includes an explanation on the steps taken to find female candidates. The Faculty furthermore aims to collect ideas about diversity bottom-up. Another issue, specifically in Groningen, is social background, since a relatively high proportion of the students are first generation students. These students often encounter difficulties in their study progress. This is an issue that needs to be addressed in a way that helps students. The committee has learned that the Faculty will appoint a diversity officer who will be charged with developing an action plan. The committee hopes that new mechanisms for promoting and monitoring various types of diversity and inclusivity will ensue shortly.

Finally, the strategy for promoting research integrity makes good sense. The Faculty of Arts adheres to the Netherlands Code of Conduct for Research Integrity and university-wide regulations, with due attention for talking about these policies and an appointed advisor for scientific integrity.

HR policy

Apart from diversity, an important issue in HR policy is the balance between research and teaching and the effect of both on career development. In general, research profiles are leading when creating or confirming permanent appointments. However, the Faculty of Arts Strategic Plan for 2021-26 also mentions exploring

the option of promotion to the rank of Associate Professor on the basis of a teaching profile. The committee has learned that the relative weights of teaching versus research generally do not cause problems when promoting staff, but feels that it would be helpful if this balance would be described more clearly in the hiring and promotion strategy.

The national 'recognition and rewards' programme (which started in 2019) has deliberately opened the door to recognising and rewarding different skills in academic HR policy and research evaluation, thus enabling diversified career paths. The committee learned that the Faculty is looking into ways to implement the principles of this programme in its HR policy, which would involve taking a clear stand on what is expected of staff in terms of management and outreach, and on how such efforts are compensated and rewarded. The committee hopes that the planned implementation of 'recognition and rewards' can be given some priority in the coming period.

The committee feels that the GIA staff generally have a strongly developed sense of leadership in coaching and mentoring. Senior researchers try to stimulate junior researchers to reach the next level and to move further according to their own design. Collaboration is an important part of this endeavour: research staff spend a lot of time in creating international infrastructures, in bringing universities together and in sharing databases. In the Research Master in Archaeology academic leadership is a major topic, and this continues to be so in the Graduate School. Another topic where GIA staff show leadership is in raising awareness on societal responsibility.

As elsewhere in Dutch academia, the workload of staff is high. The 57:43 ratio of research to teaching is difficult to reach especially for younger researchers who are building their careers and have to submit grant applications, supervise PhD candidates, develop courses and administer projects or fulfil other administrative duties within the Faculty. The threat of burnout is very real at this career stage. For senior researchers, administrative tasks and the supervision of PhD candidates can take up much of the time that

should be spent on research, forcing researchers to write publications in their spare time. The committee was pleased to note that there are some recent developments, which have improved the situation or will soon improve it, partly in connection to national 'sector plan' funding. The Faculty of Arts has chosen to use this additional funding partly for introducing research sabbaticals – a development applauded by all concerned.

A final remark concerns the onboarding of new staff, especially postdocs. Although the postdocs the committee spoke to were positive about the mentoring they received, at the same time a number of them felt that they had to find their own way within GIA. Whereas supervision and coaching is well developed for PhD candidates, it is felt to be less so for postdocs. They also felt that the career perspective requires more attention, since postdocs generally have reached a stage in life that differs from the PhD candidates. The committee recommends that both Faculty and GIA staff consider how to improve and/or extend the onboarding of postdocs within the institute.

PhD policy and training

With an average enrolment of 4.2 per year, PhD candidates are an important part of the research activities of GIA. The training and coaching of PhD candidates is a joint effort of the institute and the Faculty-run Graduate School of the Humanities (GSH). GSH hosts PhD candidates in two main categories: PhD candidates with an employee status and scholarship PhD candidates who are either funded by the UG or by other (foreign) scholarship providers. GSH is home to all activities involving PhD research, PhD training, PhD supervision, and graduation within the Faculty of Arts.

All PhD candidates are enrolled in the GSH. One month after starting, they are required to submit a Training and Supervision Plan (TSP). In this plan they specify their supervisor, an outline of their research project, a list of training activities they plan to undertake and their Research Data Management Plan (RDMP). The PhD programme includes a training component of 30 ECTS. A number of training modules are mandatory, for instance the introductory event, the module on

Academic Integrity, and the 'go/no go' review moment.

The committee met with a dynamic and enthusiastic group of PhD candidates who demonstrate a sense of ownership about their projects. In general, they feel that they are well taken care of. The training programme combines a number of mandatory courses with sufficient freedom to allow students to explore their own paths. One of the students followed a special training on data extraction in Barcelona. PhD candidates who want to teach follow a teaching course before they start teaching. The teaching of PhD candidates is limited, although most candidates do offer workshops and guest lectures.

Supervision is intense, in the first year often on a weekly basis. A number of candidates (for instance within the Arctic Centre) also have been allocated a 'buddy', another PhD who makes the new candidate feel at home and shows her or him around. The committee feels this buddy system to be a good addition to the supervision system and recommends that it is included as a standard feature.

In the plans to improve the PhD trajectory, the focus is on feasibility. This is because the duration of PhD trajectories in the past years was often longer than 5 years; over the period 2013 – 2016, only 31% of the PhD candidates managed to complete their thesis within 5 years. The Faculty now has set the target that by 2026, 70% of the PhD candidates will have their manuscripts approved within 5 years. One of the main measures to increase PhD success rates is by formulating precise, feasible requirements about the size and shape of the thesis before the PhD programme begins. This is assessed during a so-called 'feasibility check' of the TSP. The Faculty stresses the point that "the PhD thesis should not be regarded as a magnum opus but rather as a test of the PhD student's ability in the shape of a project with a deadline". (Faculty of Arts Strategic Plan 2021-2026, p. 14). A second measure is enhancing the supervision and coaching before and during the programme. The feasibility check is performed by the director of GIA.

In general, the committee approves of the measures to improve and assess the feasibility of a PhD project. However, there has been some discussion about the implications of the feasibility check for the format of the thesis: the default option is a thesis that combines three papers. Writing a monograph is still an option, but the committee noted that it is being discouraged, since the monograph format often leads to time management problems towards the end of a PhD trajectory. The PhD candidates the committee spoke to did not have an issue with the 'nudging' towards an article format. The committee understands the reasons for promoting the article format, as long as a monograph still remains an option for PhD candidates who have good reasons to choose the latter format.

Moreover, the committee recommends that the different types of PhD candidates are taken into account when determining the success rates of PhD projects. For example, of external part-time PhD candidates it can be expected beforehand that the project will last longer than 5 years. It became clear, however, that this is already done in practice, and thus that the success rates need to be nuanced.

The PhD candidates experience some stress due to the 'go/no go' moment, although the committee learned that in general potential problems with a PhD trajectory are identified in due time, that is long before the 'go/no go' moment. For most PhD candidates this moment is a formality, although they appreciate the idea of establishing a moment to see where they are and to discuss the upcoming activities. Moreover, the committee learned that the a 'no go' is actually a 'not yet go', and that in such a case candidates can adjust their research plans within a specific time frame.

Some PhD candidates reported problems with stress. Whilst this is not unexpected within a PhD, the committee found that the COVID pandemic exacerbated this. Mental health problems due to the lockdown were mentioned as well. Support groups for PhD candidates are available every two weeks. These are ongoing and are found to be helpful.

In response to the pandemic, extensions were also provided (three months' extra time). However, this was not enough for everybody. The committee advises the GIA to monitor these impacts and to offer support where needed.

The PhD candidates generally feel that they are being prepared sufficiently for a career; however preparation for a career outside academia could be more pronounced. One of the candidates for instance mentioned that if they want to work in commercial archaeology, a PhD without fieldwork is worthless. They need to do sufficient fieldwork to obtain a certificate required for commercial archaeology. The committee recommends giving preparation for a career outside academia a more prominent place in the training programme for PhD candidates.

Finally, the committee found that the focus on societal impact differs for each PhD trajectory. For candidates that are NWO-funded, attention to societal relevance is one of the requirements. One of the candidates, who works for the Arctic Centre, told the committee that her fieldwork is largely done by villagers from indigenous communities; however, she had to find out for herself how to organise the fieldwork in this setting. In general, the committee feels that societal impact could be a more structural part of the PhD trajectory and the research plan. This may include training in outreach for archaeologists. The committee feels that societal relevance should have a more prominent place in PhD trajectories and advises GSH to consult the new impact officer on this issue.

In summary, the committee feels that the PhD training and supervision is in good hands at GIA and the Graduate School for the Humanities. While the PhD success rate had been an issue during the previous period, measures have been taken to increase the chances of a feasible PhD trajectory. Both the 'go/no go' moment and the feasibility check are useful measures in this regard. The training programme offers sufficient options to tailor it to specific needs. The PhD candidates are well-prepared for an academic career, but preparation for a career outside academia could be more pronounced. More focus on societal

relevance would help to keep this important aspect as a top priority for the PhD candidates as well.

3. Research Quality

In the reporting period, GIA's strategic aims have been firmly directed at further boosting research quality, stimulating collaboration and external funding acquisition. This has resulted in an impressive number of peer-reviewed articles, monographs and book chapters. Many peer-reviewed articles were accepted by journals in the field of archaeological sciences such as *Antiquity* and *Journal of Archaeological Science* and by more general scientific journals such as *Nature* and *PLOS One*. The peer-reviewed articles have been used to define 17 research themes on which GIA staff have published. The citation characteristics of these articles compare favourably with those of other institutes related to the same themes. This analysis shows that within the research areas indicated by these 17 research themes, GIA has been quite successful.

Moreover, the committee is convinced of the quality and the unique focus of the research done at GIA. The committee has seen a number of examples of cutting edge research, connected to GIA's research themes and archaeological collections. Particular striking to the committee was the research connected to landscape archaeology, and the research done at the Arctic Centre, with its strong interdisciplinary base. Without neglecting the research in other areas, the Arctic Centre appears to be one of the 'jewels in the crown' of GIA. This is also true for the collections and related research on archaeozoology and archaeobotany.

Academic leadership and fundraising

Several markers of external esteem are identified in the self-evaluation provided by GIA. Evidential indicators include prizes, grant capture, membership of research councils and committees at national and international level, guest researchers and professorships by special appointment.

As already mentioned in the section on strategy, GIA has been quite successful in grant capture, which has remained at the same high level as during the previous review. The year 2021 has been exceptionally successful with a grant capture of over 4,5 million euros; the research proposal 'Bringing Back the Dead' landed 1.5 million euro alone. The largest funding partner is the Dutch Research Council (NWO), which has funded several large projects. GIA also participated in two EU-funded ITN projects and attracted two Marie Curie laureates. Two NWO-VENI postdocs now hold tenured positions, underlining their quality.

Another indicator of quality is the interest that commercial partners show in graduates and PhD candidates from Groningen. Stakeholders mention the involvement of GIA in the Dutch archaeological system and the focus on fieldwork, both in the educational system and in a number of PhD trajectories. The committee learned that the market often prefers candidates from Groningen because of their experience with fieldwork.

The committee agrees with GIA's publication strategy, in which open access publications are becoming increasingly important (see also the section on Open Science below). A concern that was voiced by postdocs and junior staff are the regulations about co-authorship; although there were no concrete examples where co-authorship had been an issue, these staff members felt that these regulations could be more formalised. The committee agrees and advises GIA to develop a clear policy about co-authorship.

A final, but important condition for good quality research are the resources: the laboratories, the collections and the equipment (for instance microscopes). Although the housing situation is a serious issue, as mentioned before, the committee would like to stress that the high quality and the unique character of the reference collections on archaeozoology and –botany are beyond doubt. Moreover, GIA is satisfied with the current state of the equipment; in 2018, new microscopes for the archaeobotany department were acquired.

Open Science

Open Science is part of the strategy of the University of Groningen and is therefore promoted at both University and Faculty level. Open Science is defined as the 'new normal' by the League of European Research Universities, of which the University of Groningen is part. The University has instituted an Open Science programme, which contains the following pillars:

1. Further implementation of Open Access publishing
2. Stimulating FAIR Data and providing more information on Open Data
3. Stimulating the use of Open Educational Resources
4. Achieve maximum impact of science on society by Public Engagement
5. Develop an Open Science Communication approach to raise awareness

The Faculty of Arts offers researchers of GIA an infrastructure to deposit their data, in cooperation with the Groningen Digital Competence Centre. This infrastructure includes a tool to store data management plans, repositories for the registration of datasets, and Virtual Research Workspaces (VRW). At Faculty level, a data steward is employed to advise on items like data storage and Research Data Management Plans.

During the review period, the percentage of Open Access (OA) publications from GIA has increased from 38% (in 2016) to 58% (in 2021). This increase has been due partly to the large number of NWO-funded projects (for which OA is mandatory). Furthermore, GIA has made good use of the COVID quarantine period to make their series Palaeohistoria and Paleo-aktueel fully accessible. In 2021 a project was started to digitise thousands of excavation photos from the period 1910-1960 as Open Access resources.

The committee has discussed the Open Science policies with several groups of researchers and stakeholders. The committee learned that all PhD candidates receive training on data management and FAIR principles as one of the compulsory courses. They also have to hand in a Research

Data Management Plan (RDMP) as part of the preparation for their research. The stakeholders also underline the importance of Open Access. Since commercial archaeological companies do not have contracts with the large publishing companies, Open Access is an important way for them to keep abreast of the latest state of scientific research and to have access to published research and the underlying data.

One of the prerequisites for data management is an accessible and transparent digital infrastructure. The committee found that junior staff members were not impressed with this infrastructure. One staff member mentioned that the facilities for managing and analysing datasets were 'sub-optimal', and that technical support is lacking. The committee recommends that the institute and the Faculty look into these complaints and explore possible improvements, for instance in the area of technical support.

A final point of attention concerns the special character of archaeological data and relevant software. The committee has found no mention of software in the documents at all, although in general outdated software and operating systems are considered to be one of the main risks in data storage and accessibility of data in the future. The committee recommends expanding the data storage policies to explicitly include and to tailor them to the specific needs of archaeological research. The Faculty Data Steward could be helpful in achieving this. Therefore it is necessary that this Data Steward has the required specialist archaeological knowledge.

In summary, the committee is impressed with the research quality achieved by GIA during the evaluation period. Strengths include GIA's leadership on a number of relevant research themes, the successful attraction of substantial grants and the publication strategy. Although housing the collections remains an issue, the resources themselves are of excellent quality. GIA and its researchers are on their way to achieving the Faculty's Open Access goals (of 80% Open Access). Some improvements have been proposed in the areas of co-authorship and long-term storage of software. However, the committee has

no doubt that GIA will be able to resolve these issues promptly.

4. Societal relevance

The committee was pleased to note that societal relevance has become more prominent over the last six years. The committee is impressed with GIA's achievements in terms of contributions to society, both in the city of Groningen and the 'Groninger Ommelanden' (region), but also elsewhere. The documentation included examples of books, source publications, catalogues, websites, films, exhibitions and lectures aimed at professional and general audiences. Often, such publications and products are connected to projects that involve societal partners.

Stakeholders

After the assessment of 2016, one of the attention points was to define clear target audiences. These target groups and the aims behind collaboration with these stakeholders have now been made explicit. The main groups of stakeholders are policy makers, monument management organisations and the general public. A group of stakeholders the committee feels are important as well consists of the large nature, heritage and management organisations that also play a part in the archaeological preservation. Examples are Natuurmonumenten, Staatsbosbeheer but also the Drenths Museum. However, the Yesse case study (the excavation of Yesse monastery, located south of the city of Groningen) shows that these organisations (Groninger Landschap) are involved as well. This case study also clarifies the type of collaboration being pursued and the contribution made towards this group of stakeholders. The committee recommends including these organisations in the outreach strategy as well.

Scale and relevance

GIA has outlined a range of examples of wider societal interest, from a desire for introductory courses in archaeology to the abuse of the past in political contexts. The institute presents a range of examples of recognition for the societal relevance of their scientific expertise, e.g. advisory roles of staff outside academia. An example of GIA

research products of societal relevance is the Archaeological Heritage Management (AHM) research on the Stone Age and terp mound area surveys that assess erosion from ploughing. GIA participates in outreach activities organised by the university, for instance the Arts Festival. An interesting example with political significance is the contribution to the discussion of the Myth of Sparta by nationalist and neo-fascist groups and politicians.

During the conversations with staff and stakeholders, the committee gained more insights in the societal impact of research conducted by GIA. The research of the Arctic Centre offers some interesting examples. The committee learned that research in the Arctic is increasingly conducted in collaboration with indigenous communities, in this case consisting of Inuit and Sami people. Research proposals are developed in line with the interests and wishes of these communities. One of the stakeholders reminded the committee of the fact that the research conducted by the Arctic Centre allows The Netherlands to be present as an observer in the Arctic Council. Since this council has a pivotal role in the Arctic, especially in the context of climate change and shifting global alliances, the importance of this presence is not to be underestimated.

Although the examples offered in this section show that there are ample cases of research with a societal impact at GIA, the committee noted during the conversations with PhD candidates and postdocs that societal relevance is not always a top priority for them. For a number of research staff, societal impact seemed to come as an afterthought: they use social media and participate in the Arts Festival, but a more structural framework linking their research to societal issues sometimes seems to be lacking. The committee feels that relevance to society should be a part of every research proposal. The committee therefore recommends that GIA ensures that societal impact is a structural part of research. Moreover, it would be advisable to have a clear accounting of the societal impact at the start and at the end of each research project.

A final issue when it comes to societal relevance is GIA's website. The committee learned that the current website is out-of-date and has not been updated or renewed since the last review period. This is noted as a weakness in the self-evaluation report, as is the visibility of GIA in social media. The committee believes that both website and social media are indispensable in creating an effective outreach strategy and urges GIA to invest in both and to make sure that steps are being taken to improve these essential media, if only to be found on the internet.

5. Viability

For the current research review GIA has developed position papers for a number of selected research themes. The committee feels that these position papers are very helpful for mapping out future aims. For each research theme, the current position in the field is described as well as the ambitions for the coming years. The committee notes that the analysis and further development of archaeological datasets figure prominently on these lists of ambitions. The same is true for the aims regarding societal relevance. For instance, the bioarchaeological group aims to use bioarchaeological datasets for historical baseline research related to challenges such as biodiversity loss and climate change. Another example is the research theme Critical Heritage Studies, which aims to explore GIA's contribution to pressing modern-day questions, such as the resurgence of nationalism, widespread polarization or identity politics in modern society. The committee feels that these aims contribute to the viability of GIA.

Of course, GIA as a whole also has formulated its strategic ambitions for the period 2022 – 2027 (as covered above in the section on aims and strategy). Realising these strategic ambitions also helps to increase the viability of the institute. An important ambition, according to the committee, is the strategic aim to increase the focus on EU funding schemes to counter the current NWO restrictions. The ambitions also include a number of targets aimed at furthering the relevance and impact of research, for instance in fieldwork and in the use of bioarchaeological datasets. Increased collaboration also figures in the list of ambitions,

for instance in collaborative research projects in Roman period Mediterranean research. The committee is of the opinion that the stress on relevance, impact and collaboration contributes to the viability of the institute. The committee approves of the high scientific and societal relevance of these goals, which show that GIA is very ambitious and strives for scientific excellence as well as for being a key player in societal debates. Furthermore, the committee feels that the strategic aims coincide very well with current developments in research (inter)nationally.

Risks and measures

Several ambitions mentioned in this section are related to the bioarchaeological collections. As mentioned above, the housing conditions of these collections are suboptimal, to put it mildly. Therefore, the housing conditions also affect the viability of the institute. Although the plans for the Vault are promising, the committee stresses the urgency of the recommendations voiced earlier in this report. The committee feels that the University Board should be convinced of the wider scientific and societal relevance of the bioarchaeological collections. These collections contain unmatched genetic resources which in due time should be considered a university asset for research into maintaining future crop and livestock biodiversity, and perhaps even for developing sustainable models to enhance food security.

Another issue that is relevant for the viability of GIA is the data infrastructure, including the digital skills of the support staff. This is especially relevant for the research group Digital Archaeology, but since digital developments are increasing in importance in all research fields, state-of-the-art data infrastructure is relevant for GIA as a whole. The position paper of Digital Archaeology mentions that collaborations with key partners need to be developed, both internal (Centre for Information Technology, Data Competence Centre) and external (such as Data Archiving and Networked Services - DANS). The position paper also recommends that budget and training resources are allocated to keep the workflows of digital fieldwork recording (such as drone photogrammetry, on-site data entry and

geophysical survey), CAD/GIS conversions, post-excavation and data-recording up to date. The committee strongly agrees with these recommendations.

The self-evaluation also mentions as a weakness that it is difficult for the support staff to keep up to date with the strong developments in new methods. Therefore, it will be necessary to train the current support staff in both new methods and digital skills, and/or to hire new scientific staff. The committee strongly backs this recommendation to make sure that the digital infrastructure and support staff are ready to support the new types of research that are envisioned by the institute.

A final point that has been mentioned both in the self-evaluation and during the site visit is the diversity in tenured staff. The self-evaluation notes an imbalance within GIA in terms of age, gender and nationality. During the site visit, some of these imbalances have been confirmed. While in the hiring of PhD candidates, postdocs and assistant professors diversity in gender and nationality is increasing, this balance is less obvious in the older tenured staff. The committee has established that GIA is conscious of this problem and is taking steps to address it. The committee also learned that a university-wide policy has been adapted to favour female candidates when hiring full professors. The committee therefore is confident that in time these issues will be solved. Issues about diversity, however, will not simply be resolved by hiring policies, but will also require GIA to have open conversations about their culture, how this relates to diversity and in turn what its impact is on research culture and quality.

In summary, the committee gained a favourable impression of the viability of GIA. Both the strategic aims of the institute and of the research groups offer a good base to improve the impact and societal relevance of GIA's research. The financial foundation of the institute has improved during the review period and can be strengthened with a focus on EU funding. The main challenges are the housing situation of the bioarchaeological collections and the digital infrastructure and support. However, GIA is well aware of these

challenges and has taken steps to improve both – although the committee realises that for solving these challenges GIA largely depends on the Faculty of Arts and the University.

Conclusion and recommendations

In order to develop the GIA's and the Faculty's policies and achieved research quality further, the committee offers the following recommendations:

- The committee is of the opinion that the current housing situation of the GIA collections is unacceptable. If the relocation turns out to be a long-term prospect, the committee recommends that a temporary solution should be found in another building, where safety and protection of the world-class collections are ensured.
- The committee noted that digital support is currently insufficient and that a strategic decision is required concerning the tasks and training of support staff, and the hiring of new scientific staff. The committee strongly backs this recommendation to make sure that the digital infrastructure and support staff are ready to support the new types of research that are envisioned by the institute to strengthen GIA's position in digital archaeology and (bio) heritage studies .
- The committee feels that it is important for GIA to maintain a firm grip on the entire organisation of research and education, without losing the advantages of an informal organisation.
- The committee has established that the position papers on various research themes represent a useful exercise to look to the future and encourages GIA to continue on this path and develop an overall position paper for the institute as a whole.
- The committee feels that relevance to society should be a part of every research proposal. The committee therefore recommends that GIA ensures that societal impact is a structural part of research. Moreover, it would be advisable to have a clear accounting of the societal impact at the start and at the end of each research project.
- The committee recommends expanding the data storage policies to include software issues and tailoring them to the specific needs of archaeological research.
- The committee recommends that GIA develop a clear policy on co-authorship, to avoid misunderstandings and to address concerns of postdocs and junior staff. This is all the more important because GIA encourages writing a thesis that combines three papers and discourages writing monographs.
- The committee believes that both website and social media are indispensable in creating an effective outreach strategy and urges GIA to invest in both.
- The committee feels that the 'buddy system', in which a junior staff member makes a new PhD candidate feel at home, is a good addition to the supervision system and recommends that it is included as a standard feature.
- The committee recommends giving preparation for a career outside academia a more prominent place in the training programme for PhD candidates and postdocs.
- The committee recommends that the GIA staff considers improving and/or extending the onboarding of postdocs within the institute.
- The committee believes it would be advisable to include staff in developing further policies to improve diversity and inclusion within GIA.

III. Appendices

1. Resumes of committee members

Prof. dr. Amy Bogaard (Chair)

Amy Bogaard FBA is a Canadian archaeologist and Professor of Neolithic and Bronze Age Archaeology at the University of Oxford. Bogaard was appointed Lecturer of Neolithic and Bronze Age Archaeology at the School of Archaeology, University of Oxford. She was awarded the Shanghai Archaeology Forum Research Award in 2015. She currently is a stipendiary lecturer at St Peter's College, and an external professor at the Santa Fe Institute.

In 2013, Bogaard was awarded an ERC starter grant for the project The Agricultural Origins of Urban Civilization. In 2018, Bogaard was part of a team to win an ERC Synergy grant for the project Exploring the Dynamics and Causes of Prehistoric Land Use Change in the Cradle of European Farming. She is a member of the ERC-funded FEEDSAX Project. Bogaard was elected as a Fellow of the British Academy in 2020.

Prof. dr. Frank Vermeulen

Since 1999, Frank Vermeulen is a Full Professor in Roman archaeology and archaeological methodology at Ghent University. Between 2015 and 2019 he was Chairman of the Department of Archaeology at Ghent University.

Frank Vermeulen is particularly interested in Roman settlement archaeology and geo-archaeological approaches to ancient Mediterranean landscapes and has a keen interest in IT applications in archaeology. He is a renowned specialist in non-invasive field methods, such as aerial photography and geophysical prospection. Since 2000 he directed large field projects in Italy, Portugal and France. Recently his research has focused on the study of Roman colonialism and urbanism, in particular concerning central Italy. Part of this research is based on the direction during the last two decades of a multidisciplinary field project about settlement dynamics in the Potenza Valley

(Marche) and on a series of collaborative field projects on abandoned Roman towns in Lazio.

Prof. dr. Graeme Warren

Graeme Warren is a Professor in the School of Archaeology, University College Dublin, having been appointed in 2002 to expand the School's practical teaching skills and provide a specialism in early prehistory. His archaeological research includes hunter-gatherers, humans in mountain landscapes, and long-term landscape histories.

Warren is a specialist in the Archaeology of Hunter-Gatherers, with a primary research focus mainly in NW Europe. He is President of the International Society for Hunter-Gatherer Research. He is also the coordinator of the MSc/G Dip in Hunter-Gatherer Archaeology. He leads active research projects focusing on hunter-gatherer material culture and landscapes in Ireland and Scotland, and is a collaborator on a major international project focusing on Norway and Scotland (<https://uis.no/en/life-after-storegga-tsunami-last>). He leads the UCD Hunter-Gatherer Research Group..

Warren's research interests also include long-term histories of landscapes, and he co-directs a major field project in Glendalough. This collaborative project includes teaching, community archaeology, contributions to the management of the landscape and is providing new information about an iconic Irish landscape.

Dr. Martin Meffert

Martin Meffert is a senior policy officer archaeological heritage, province Noord-Brabant, The Netherlands. This includes advising on, implementation and establishing of provincial archaeology policy. Martin is also content manager of the Provincial Archaeological Repository and Archive North Brabant. His speciality is spatial development and archaeology of the Roman Iron Age.

Louise Olerud MA

Louise Olerud completed her Bachelor (2017) and Research Master (2019) in Archaeology cum laude at the Faculty of Archaeology, Leiden University. She specialised in the Late Prehistory of Northwestern Europe. During her studies, Louise worked as a student-assistant at the European Prehistory department (2016- 2019), post-processing the archaeological fieldwork (coring and test trench excavations) at the barrow alignment of Epe-Niersen. In 2018 she studied abroad for one semester at Aarhus University, Denmark. After graduation, Louise worked as an archaeological advisor at the municipality of Delft (2020-2021).

Since September 2021, Louise is a PhD candidate at the Faculty of Archaeology, in the NWO-funded VIDI project The Talking Dead. Reconstructing the

transmission of information in Corded Ware and Bell Beaker Societies during the 3rd Millennium BC, led by dr. Quentin Bourgeois. This research project focuses on the rigid burial rites widely shared throughout Europe during the third millennium BCE and aims to understand these rites better through dynamic network analysis. Louise focuses on north-western Europe (roughly The Netherlands, Denmark, Germany and the UK) and aims to better understand the dynamics behind the apparently changed perception of the human body in this transitional period between the Neolithic and the Bronze Age. The third millennium BCE is generally associated with the development of individualism as well as binary gender symbolism. Louise will investigate this new personhood and to what extent it is related to the increase in human mobility seen in this period.

2. Schedule of the site visit

Site visit GIA: 30 November and 1 December

Location: Feithhuis

Martinikerkhof 10

9712 JG Groningen

November 30	
9.00	First meeting committee, preparations
11.00	Meeting with management <ul style="list-style-type: none"> • Dean Faculty of Arts • Coordinator Graduate School for the Humanities • Director GIA • Policy Officer Research • Research Coordinator GIA
12.00	Lunch
13.30	Meeting with senior researchers: <ul style="list-style-type: none"> • Professor Classical & Mediterranean Archaeology • Assistant Professor Zooarchaeology • Associate Professor Arctic Ecology • Associate Professor Hunter- Gatherer Archaeology • Associate Professor Mediterranean Landscape Archaeology • Full professor Greek Archaeology
14.30	Break
15.00	Meeting with PhD candidates: <ul style="list-style-type: none"> • PhD candidate Zooarchaeology • PhD candidate Mesolithic • PhD candidate Medieval Archaeology • PhD candidate Survey Archaeology • PhD candidate Microwear Analysis • PhD candidate Archaeobotany
16.00	Wrap-up

December 1	
9.00	Meeting with stakeholders, <i>online</i>: <ul style="list-style-type: none"> • Professor Archaeology, Süleman Demirel University, Isparta, Turkey • Senior Policy Advisor Polar Affairs and Oceans, Ministry of Foreign Affairs, The Netherlands • Manager Research and Development, Archaeological Research & Advice (ADC)
10.00	Meeting with postdocs and junior (non-tenured) staff: <ul style="list-style-type: none"> • Postdoc Zooarchaeology, Stable Isotope Analysis (NWO) • Assistant Professor Landscape Archaeology, Roman Archaeology • Postdoc Sedimentological and Geochemical Analyses Italian Salt Production (NWO) • Postdoc Soil Micromorphology Prehistoric Shell Middens (EU Marie Curie) • Assistant Professor Greek Archaeology, Human Osteology
11.00	Interactive tour buildings: showcasing interesting projects and facilities
13.00	Lunch
14.00	Additional requests or meetings, wrap up, writing session
16.00	First feedback by committee and drinks

3. List of abbreviations

AHM	Archaeological Heritage Management
DANS	Data Archiving and Network Services
DCC	Digital Competence Centre
FAIR (data)	Findable, Accessible, Interoperable and Reusable
GIA	Groningen Institute of Archaeology
GSH	Graduate School for the Humanities
KNAW	Royal Netherlands Academy of Arts and Sciences
NWO	Dutch Research Council
OA	Open Access
RDMP	Research Data Management Plan
SEP	Strategy Evaluation Protocol 2021-2027
TSP	Training and Supervision Plan
UG	University of Groningen
VRW	Virtual Research Workspace